

Remarks

In the Office Action mailed November 24, 2004, Claims 1, 4, 9, 11, 14-19, 21, and 24-29 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,190,287 to Nashner. Independent Claims 1, 11, and 21 were amended in a submission filed February 24, 2005 in connection with an RCE also filed that date. With this Supplemental Amendment, independent Claims 1, 11, and 21 have been further amended to render the rejections of the Office Action mailed November 24, 2004 moot, and place the case in condition for allowance, as explained below.

The Claimed Invention

Specifically, the claims describe a method comprising defining a role as associated with a defined performance and a skill having a required skill level. The defined performance is quantifiable as an actual performance metric. This may include, for example, identifying a job necessary to achieve the business objective of an organization. The job may be something such as an invoice processor. The job is associated with a skill, such as typing. The skill has a required skill level, such as 50 words per minute. The job has a defined performance, such as processing invoices. An actual performance metric is a measure of an individual carrying out the defined performance associated with the role, or job. An example would be an individual actually processes 15 invoices per day accurately. Thus, it may be helpful to think of the actual performance metric of the claimed invention as quantifying a higher-level performance as compared to the skill. The skill is typically a component of a performance. Several skills typically are involved in a job performance.

The claimed invention also includes associating an individual with the role. The individual has a possessed skill correlating with the required skill of the role and an actual skill level quantifying the possessed skill. In the example where invoice processor is the job, or role, the individual has a typing skill, for example, and the individual is associated with the job. The skill is typing at a required skill level of 50 words per minute, while the individual possesses an actual typing skill at a level of 45 words per minute, for example. An actual performance metric for the defined performance may be 15 invoices processed by the

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individual in a day. The actual performance metric is a measure that quantifies the defined performance of the individual independent of the quantified actual skill level of the individual, i.e., the actual performance metric is 15 invoices per day, while the actual typing skill level of the individual is 45 words per minute. Thus, the higher-level actual performance metric is not a measure of the typing skill level of the individual, although typing is a skill associated with the role. The assumption may exist that training leading to faster typing will lead to faster invoice processing. In one embodiment, this invention allows an assumption like that to be put to the test.

A first actual performance metric for the defined performance of the individual is quantified before the event occurs that potentially increases the actual skill level of the individual. Recall that quantifying the first higher-level performance metric is independent of measuring the actual skill level of the individual, i.e., the number of words the individual typed per minute. The performance metric of the individual in the case of processing invoices may be 15 invoices per day. Thus, the individual performs the role, i.e. invoice processor, having a defined performance, i.e., processing invoices, at a performance metric, i.e. 15 invoices per day. In this example, the event may be training that increases the individual's typing skill level, to 52 words per minute.

A second performance metric is quantified after the event occurrence. Quantifying the second performance metric is not the same as measuring the typing skill level. The second performance metric may be 15 invoices per day, just like the first one. Or the second performance metric might be smaller or greater than the first performance metric, such as an increase to 16 invoices per day, or a decrease to 14 invoices per day. In other words, the individual now executes the defined performance, i.e. processing invoices at 14 or 16 invoices per day, after an event occurrence (e.g. training), that increased an actual skill level (i.e. typing), from 45 to 52 words per minute. However, even though the actual skill (i.e. typing speed) may have increased, the later performance metric is not necessarily greater than the first performance metric. The actual performance metric is independent of the quantified actual skill level of the individual, i.e. the higher-level performance is not a measure of the lower-level proficiency. Thus, the skill can potentially increase while the performance of the job does not.

The method further includes analyzing a relationship between the first and second actual performance metrics and the actual skill level of the individual before and after the event occurrence and determining whether the event occurrence increased the defined performance of the individual based at least partially on the relationship between the first and second actual performance metrics and the actual skill level of the individual before and after the event occurrence. Thus, the method includes determining to what extent the lower-level skill proficiency affects the performance of the individual.

The Nashner Reference

As is known and discussed in the reference, a major factor influencing the cost of skill training for physical rehabilitation is the level of supervision required by a skilled practitioner. Therefore, health care providers have implemented home-based services wherein a training subject (typically a patient undergoing rehabilitation) performs a substantial portion of prescribed training exercises at home rather than in a professionally supervised clinical environment. However, when a patient performs training exercises in the absence of professionally trained supervision, there is a substantially greater risk that the patient will be poorly motivated to perform at an optimal level of intensity, and instead will continue to perform simpler, less-challenging exercises when they are no longer needed, and will perform exercises incorrectly.

To address these problems, the Nashner reference discloses a system for remotely monitoring a training program performed by a patient remote from the professional prescriber. The training program includes at least one task to be performed a plurality of times during an interval of time. Evaluation of the patient is accomplished by using measuring device 11 upon which the subject performs the prescribed tasks. The measuring device 11 is disclosed as a force plate that measures variables of force related to a patient's performance during prescribed seated, standing, and walking tasks. Training professionals select certain tasks to aid the reacquisition or improvement of the patient's lost or deficient skills. Thus, the professional prescribes tasks that have been shown to improve the patient's skills.

The measuring device 11 provides data quantifying the accuracy and the number of tasks performed by the subject during the time interval in communication with a display unit

21 for displaying data resulting from the patient's performance of the prescribed tasks. The data available at the display unit 21 is the number ("quantity") and quantified accuracy ("quality") of prescribed tasks performed by a patient during a time interval. This qualitative and quantitative data can be used to assess the patient's performance of the prescribed tasks.

In one embodiment of the Nashner system, the patient's motivation and the appropriateness of the training program prescribed and remotely monitored by the professional is determined based on a comparison of the professional's expected training performance and the patient's actual training performance data. The professional's expectations are based on an initial assessment of the subject. Table 1 at Col. 6, Line 2 of the reference is a chart showing how the professional program prescriber determines the effectiveness of the prescribed training.

In particular, if data shows that the patient is not performing as the professional expected in terms of both the number and quality of prescribed tasks, then the patient is unmotivated to exert sufficient effort during training, and the professional can identify lack of patient motivation as the primary reason the patient is not performing as expected. On the other hand, if the performance data shows that the patient is performing better than the prescriber expected in terms of both the number and quality of prescribed tasks, the difficulty of the training program should be increased.

In another embodiment of the Nashner system, the professional training program prescriber determines an expected performance of training tasks for the patient based on initial assessment data for the patient and data derived from a reference population. Typically, the reference population will consist of a group of normal individuals age-matched to the patient or a group of patients with similar diagnoses. The number and quality of tasks performed by the patient is then compared to data from a reference population performing the tasks. Table 2 at Col. 7, Line 14 shows how this data is used to determine the patient's motivation and the appropriateness of the training program prescribed and remotely monitored by the professional.

In both of the embodiments Nashner discloses, the results of the subject's performance of each task can be analyzed and displayed in a comprehensive report including graphical summaries of average scores, coefficients of variation, and left-right percentage differences

for measures that differentiate between performance of the left and right lower extremity. Each comprehensive report may also include the capability of comparing an individual patient's quality and quantity data to those of a reference population of individuals.

Nashner Does Not Disclose the Claimed Invention

The claimed invention includes the step of defining a role associated with a defined performance quantifiable as an actual performance metric. The actual performance metric of the claimed invention is independent of a quantified actual skill level of an individual associated with the role. The "expected performance" of Nashner is quantifiable is a measurement of the quality and quantity of executed tasks measured by the measuring device 11. But, in Nashner, there is no quantified actual skill level of the subject unless it is the same actual performance metric. The only metric of Nashner is the measured execution of prescribed tasks. To the extent the terms the "quantified actual performance metric" and the "quantified actual skill level" can be said to read on Nashner, they must be the same measurement.

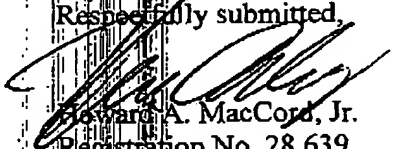
Recall that the actual performance metric of the claimed invention quantifies the defined performance of the individual independent of the quantified actual skill level of the individual. Nashner does not disclose this. This result should come as no surprise because Nashner is concerned with remotely monitoring a training program prescribed to increase a patient's performance of selected lower-level tasks. A prescriber chooses the program tasks in Nashner based on an initial assessment of a patient performing the tasks. Nashner is not concerned with, and therefore does not determine, to what extent the patient's lower-level task proficiency improves or otherwise affects a higher-level performance, as only lower-level task proficiency need be measured. As Nashner demonstrates, monitoring and increasing the lower-level task proficiency remotely accomplishes the objective of reducing the cost of rehabilitation health care services, without the need for measuring a higher-level performance.

Nashner does disclose a comprehensive report for a plurality of the patient's lower-level executed tasks, and the comprehensive report includes graphical summaries of average scores, coefficients of variation, etc. Each of the lower-level task measurements making up

the report data may represent a quantified actual lower-level skill of the subject. But there is no independent metric for the overall performance, as claimed. The comprehensive report is simply an aggregation of the patient's quantified actual lower-level skill proficiency. (i.e. it is derived, not independently measured) Predictably, the kind of comprehensive report Nashner discloses is helpful for monitoring a patient's overall lower-level skills training progress, but says nothing about how the training may affect a higher-level performance. As Nashner demonstrates, whether a rehabilitation patient is performing training tasks can be effectively monitored by directly measuring the patient's execution of the tasks. Nashner is not concerned with a higher-level performance metric or any relationship between such a metric and a patient's lower-level task proficiency.

No reasonable view of Nashner teaches or suggests the claims as amended herein. Nashner is concerned with remotely measuring a patient's execution of prescribed training tasks to provide a system for remotely monitoring a rehabilitation patient's training progress. So, Nashner is not concerned with measuring a patient's higher-level performance, and further is not concerned with whether or to what extent the prescribed training may affect a higher-level performance. According to Nashner, it is not necessary to measure a higher-level performance to remotely monitor a patient's lower-level task training. Therefore, Counsel respectfully submits that with this Supplemental Amendment, Claims 1-4, 11, 14-19, 21, and 24-29 of the application are in condition for immediate allowance.

Respectfully submitted,


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